

## REPORT DOCUMENTATION PAGE

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13. ABSTRACT (Maximum 200 words) The Gordon Research Conference (GRC) on Molecular Energy Transfer was held at Harbortown Resort, Ventura, California January 14-19, 2001. The conference was well attended with 89 participants (list enclosed). The attendees represented the spectrum of endeavor in this field coming from academia, industry, and government laboratories, both US and foreign scientists, senior researchers, young investigators, and students. In designing the formal speakers program, emphasis was placed on current unpublished research and discussion of the future target areas in this field. There was a conscious effort to stimulate lively discussion about the key issues in the field today. Time for formal presentations was limited in the interest of group discussions. In order that more scientists could communicate their most recent results, poster presentation time was scheduled. In addition to these formal interactions, "free time" was scheduled to allow informal discussions. Such discussions are fostering new collaborations and joint efforts in the field (program enclosed).		
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2001 GORDON RESEARCH CONFERENCE

on Molecular Energy Transfer

FINAL PROGRESS REPORT

AFOSR

F49620-00-1-0340

**MAILED**

8/6/01

The Gordon Research Conference (GRC) on Molecular Energy Transfer was held at Harbortown Resort, Ventura, California, January 14-19, 2001. The conference was well attended with 89 participants (list enclosed). The attendees represented the spectrum of endeavor in this field coming from academia, industry, and government laboratories; both US and foreign scientists, senior researchers, young investigators, and students.

In designing the formal speakers program, emphasis was placed on current unpublished research and discussion of the future target areas in this field. There was a conscious effort to stimulate lively discussion about the key issues in the field today. Time for formal presentations was limited in the interest of group discussions. In order that more scientists could communicate their most recent results, poster presentation time was scheduled. In addition to these formal interactions, "free time" was scheduled to allow informal discussions. Such discussions are fostering new collaborations and joint efforts in the field (program enclosed).

I want to personally thank you for your support of this Conference. As you know, in the interest of promoting the presentation of unpublished and frontier-breaking research, Gordon Research Conferences does not permit publication of meeting proceedings. If you wish any further details, please feel free to contact me. Thank you.

Joel Bowman  
Conference Chair

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## *Molecular Energy Transfer*

January 14-19, 2001  
Harbortown Resort  
Ventura, CA

Co-Chairs	
Joel Bowman (Emory University) bowman@chem44.chem.emory.edu phone: (404) 727-6692 fax: (404) 727-6628 <a href="http://www.emory.edu/CHEMISTRY/faculty/bowman.html">http://www.emory.edu/CHEMISTRY/faculty/bowman.html</a>	Hanna Reisler (University of Southern California) reisler@chem.usc.edu phone: (213) 740-7071 fax: (213) 740-3972

### Contents:

- OVERVIEW, SPONSORS & SOCIAL PROGRAM
- PROGRAM
- POSTERS
- CONFERENCE HISTORY

### Overview

As is customary, the meeting (which alternates every two years between Europe and the US) will cover all aspects of energy transfer, such as decomposition and reaction dynamics, intramolecular energy transfer, and energy transfer in media ranging from gas and clusters to condensed phases and interfaces. Several sessions will be devoted to new topics such as He nanodroplets, single molecule detection, etc. Oral sessions will take place in the morning and in the evening. At the beginning of each session, the session Chair will give a 20 minute perspective of the field. Each oral presentation will be 35 minutes, leaving ample time for discussion.

The conference will begin on Sunday afternoon at 4:30 PM with a reception and oral presentations at 7:30 PM. Poster sessions will take place after the evening talks on Monday - Thursday. Afternoons are free for discussions, volleyball at the beach, jogging, swimming, etc. Trips to nearby points of interest will be organized. The conference will culminate with the Thursday evening banquet, and the after dinner session in which the breadth of the field of molecular energy transfer, its modern practice and novel directions will be discussed. Departure is on Friday morning.

Application forms for the Gordon Conference must be submitted to the GRC office, P.O. Box 984, West Kingston, RI 02892-0984. Tel. 401 783-4011 (-7644 fax). Applications can also be made online by clicking the appropriate button at the bottom of this page. Early application is encouraged because the conference has usually close to the maximum allowed number of attendees. The deadline for registration at a reduced rate is 4 weeks prior to the conference. Please plan to apply by December 7, 2000. The deadline for submission of posters is December 22, 2000. We are trying to raise support for student and postdoc travel. The preliminary program is listed below. The full program with titles will be published in September.

### Sponsors

- U.S. Air Force Office of Scientific Research
- U.S. Office of Naval Research
- The Gordon Research Conferences
- Gaussian, Inc.
- Spectra Physics
- Continuum Lasers

### Social Program

**Social Program**

Tours to the Getty Museum and Whale Watching will be arranged for Tuesday afternoon. The cost will be about \$30 per trip. A sign-up sheet will be available on Sunday evening with more details.

**Sunday p.m. January 14, 2001**

2:00 - 9:00 p.m. Registration

6:00 p.m. Dinner

**Spectroscopy and Reactivity in Clusters**Session Chair : **Marsha I. Lester**

7:30 - 7:40 Conference Chairs: Opening Remarks

7:40 - 8:00 **Marsha I. Lester** (University of Pennsylvania)  
Perspective and overview8:00 - 8:50 **Michael C. Heaven** (Emory University)  
Non-adiabatic predissociation of Van der Waals molecules8:50 - 9:40 **Nadine Halberstadt** (Universite Paul Sabatier, Toulouse)  
Time-dependent study of vibrational energy relaxation in Van der Waals complexes: From the 1:1 diatomic-rare gas complex to the diatomic in a complete "solvent" shell**Monday a.m. January 15, 2001****Unimolecular Reactions**Session Chair: **Curt Wittig**

8:30 Conference Photo

9:00 - 9:20 **Curt Wittig** (University of Southern California)  
Perspective and overview9:20 - 10:10 **Kaoru Yamanouchi** (The University of Tokyo)  
Ultrafast structural deformation of small polyatomic molecules in intense laser fields

10:10 - 10:40 Break

10:40 - 11:30 **Thomas R. Rizzo** (Ecole Polytechnique Federale de Lausanne)  
IVR-limited unimolecular dissociation rates in state-selected HOCl and HOBr11:30 - 12:20 **Reinhard Schinke** (Max-Planck-Institut für Strömungsforschung)  
Quantum mechanical perspective of unimolecular dissociation

12:30 - 1:30 Lunch

2:00 Business Meeting

**Monday p.m. January 15, 2001**

6:00 p.m. Dinner

**Photodissociation in Complexes**Session Chair: **Jeremy M. Hutson**7:30 - 7:50 **Jeremy M. Hutson** (University of Durham)  
Perspective and overview7:50 - 8:40 **Robert E. Continetti** (University of California at San Diego)  
Studies of three-body dissociation dynamics by dissociative photodetachment8:40 - 9:30 **R. Benny Gerber** (Hebrew University)  
Photochemical reactions, charge transfer and electronic energy relaxation in weakly-bound clusters

9:30 p.m. Poster Session I

**Tuesday a.m. January 16, 2001****Photodissociation Dynamics**

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**Session Chair: Keiji Morokuma**

- 9:00 - 9:20 **Keiji Morokuma** (Emory University)  
Perspective and overview
- 9:20 - 10:10 **Laurie J. Butler** (The University of Chicago)  
Probing the dissociation dynamics of selected high-energy hydrocarbon radical isomers: Allyl, 1-propenyl and 2-propenyl
- 10:10 - 10:40 Break
- 10:40 - 11:30 **Kirk A. Peterson** (Washington State University)  
Photodissociation of halogen oxide molecules: HOCl, HOBr, and BrO
- 11:30 - 12:20 **Jingsong Zhang** (University of California, Riverside)  
Photodissociation dynamics of vinyl and ethyl radicals
- 12:30 - 1:30 Lunch
- 1:30 - 6:00 p.m. Optional Tours

**Tuesday p.m., January 16, 2001**

- 6:00 p.m. Dinner

**He Nanodroplets****Session Chair: Roger E. Miller**

- 7:30 - 7:50 **Roger E. Miller** (University of North Carolina)  
Perspective and overview
- 7:50 - 8:40 **Kenneth C. Janda** (University of California, Irvine)  
Toward chemical reaction dynamics at 0.4 K
- 8:40 - 9:30 **Andrej Vilesov** (University of Southern California)  
Molecular spectroscopy in helium droplets
- 9:30 p.m. Poster Session II

**Wednesday a.m., January 17, 2001****Bimolecular Reactions****Session Chair: Paul J. Dagdigian**

- 9:00 - 9:20 **Paul J. Dagdigian** (Johns Hopkins University)  
Perspective and overview
- 9:20 - 10:10 **Piergiorgio Casavecchia** (Universita di Perugia)  
Recent progress in crossed beam studies of reaction dynamics
- 10:10 - 10:40 Break
- 10:40 - 11:30 **David Manolopoulos** (Oxford University)  
Some recent developments in chemical reaction dynamics
- 11:30 - 12:20 **F. Javier Aoiz** (Complutense University, Madrid)  
A reaction with several paths: Dynamics and stereodynamics of the O(1D)+H<sub>2</sub> reaction
- 12:30 - 1:30 Lunch

**Wednesday p.m., January 17, 2001**

- 6:00 p.m. Dinner

**Single-Molecule Studies of Energy Transfer****Session Chair: George W. Flynn**

- 7:30 - 7:50 **George W. Flynn** (Columbia University)  
Perspective and overview
- 7:50 - 8:40 **Paul F. Barbara** (University of Texas, Austin)  
Single molecule spectroscopic studies of intramolecular energy transfer in complex systems
- 8:40 - 9:30 **Wilson Ho** (University of California, Irvine)  
Vibrational energy transfer in single adsorbed molecules with sub-Ångstrom resolution

9:30 p.m. Poster Session III

Thursday a.m., January 18, 2001

### Energy Transfer in the Condensed Phase

Session Chair: **Peter J. Rossky**

- 9:00 - 9:20 **Peter J. Rossky** (University of Texas, Austin)  
Perspective and overview
- 9:20 - 10:10 **Gilbert M. Nathanson** (University of Wisconsin, Madison)  
One second in the life of HCl in liquid glycerol: Solvation, dissociation, and recombination
- 10:10 - 10:40 Break
- 10:40 - 11:30 **Stephen E. Bradforth** (University of Southern California)  
The dynamics of photodetachment and photoionization in aqueous solution
- 11:30 - 12:20 **Tim Lian** (Emory University)  
Dynamics of molecular adsorbates on nanoparticles: vibrational relaxation, solvation and electron transfer
- 12:30 - 1:30 Lunch
- 4:00 - 6:00 p.m. Poster Session IV

Thursday p.m., January 18, 2001

6:00 p.m. Dinner

### New Trends in Molecular Energy Transfer

Session Chair: **Millard H. Alexander**

- 8:00 - 8:20 **Millard H. Alexander** (University of Maryland)  
Perspective and overview
- 8:20 - 9:20 **Stephen R. Leone** (NIST/University of Colorado)  
Molecular energy transfer - where are we going? From vibration-vibration to quantum information science
- 9:20 - 9:30 Conference Chairs: Summary Comments

Friday a.m., January 19, 2001

- 7:30 - 8:30 Breakfast
- 9:00: End of Conference; Bus Departs

### Poster Sessions I and II: Displayed Monday and Tuesday

Odd numbers: Presented Monday

Even numbers: Presented Tuesday

1. Experimental Investigation of the Low Lying Electronic States of  $\text{CH}_2\text{Cl}$   
Aaron Potter, Vladimir Dribinski, Andrey Demyanenko and Hanna Reisler  
Chemistry Department, University of Southern California
2. Laser Jet Spectroscopy of Molecular Microclusters of Pyridylindoles  
Y. Nosenko and A. Mordzinski  
Institute of Physical Chemistry, Polish Academy of Sciences, Warsaw
3. Ab Initio Calculations of Electronically Excited States of the  $\text{CH}_2\text{Cl}$  Radical  
S. Levchenko and A. Krylov.  
Chemistry Department, University of Southern California
4. The Infrared Spectroscopy of H-Bonded Dimers in their Ground and First Excited Singlet States  
Gina M. Florio, Edwin L. Sibert, III, Christopher J. Gruenloh, and Timothy S. Zwier

Purdue University, West Lafayette, IN and University of Wisconsin-Madison

5. Infrared Spectroscopy of Vibrationally Excited Methanol and Some of its Isotopomers  
D. Rueda, O. V. Boyarkin, T. R. Rizzo  
Laboratoire de Chimie Physique Moléculaire, EPFL, Lausanne  
A. Chirokolava, D. S. Perry  
Department of Chemistry, University of Akron, Ohio
6. Vibrationally Mediated Photodissociation of H<sub>2</sub>O  
Joelle Underwood, Delphine Chastaing, Judson Partin, and Curt Wittig  
Chemistry Department, University of Southern California
7. Photodissociation Dynamics of CH<sub>2</sub>OH and its Isotopomers from the 3p<sub>z</sub> Rydberg State  
Feng, L.; Khodykin, O; Conroy D; Aristov, V; Nishimura, P; Reisler, H  
Chemistry Department, University of Southern California
8. Mapping of the OH + CO reaction pathway through infrared spectroscopy of the OH-CO reactant complex  
Marsha Lester, Bethany V. Pond, Mark D. Marshall, and David T. Anderson,  
Department of Chemistry, University of Pennsylvania  
Lawrence B. Harding and Albert F. Wagner,  
Chemistry Division, Argonne National Laboratories
9. Dynamics of vibrationally mediated photodissociation of H<sub>2</sub>O and Ar-H<sub>2</sub>O,  
Sergey A. Nizkorodov, Michael Ziemkiewicz, Tanya L. Myers, David J. Nesbitt.  
JILA/NIST and Department of Chemistry and Biochemistry, University of Colorado,
10. Emission Spectroscopy and Ab Initio Characterization of the Excited States of Allyl Iodide and Allyl Alcohol Accessed Near 200 nm  
Brad Parsons and Laurie J. Butler  
Department of Chemistry, The University of Chicago
11. Ab initio calculation of widths of HOCl(7v<sub>OH</sub>, and 8v<sub>OH</sub>) resonances and comparison with experiment.  
Shengli Zou, Sergei Skokov, and Joel M. Bowman  
Cherry L. Emerson Center for Scientific Computation and Dept. of Chemistry, Emory University
12. QUASICLASSICAL TRAJECTORY STUDY OF THE H (Cl) + HCN → H<sub>2</sub> (HCl) + CN REACTION DYNAMICS AND MICROSCOPIC MECHANISM  
Diego Troya <sup>(a)</sup>, Miguel González <sup>(b)</sup> \*, Guosheng Wu <sup>(c)</sup>, and George C. Schatz <sup>(c)</sup> \*  
(a) Departamento de Química, Universidad de La Rioja,  
C/ Madre de Dios, 51. 26004 Logroño (Spain).  
(b) Departament de Química Física i Centre de Recerca en Química Teòrica,  
Universitat de Barcelona, C/ Martí i Franquès, 1. 08028 Barcelona (Spain).  
(c) Department of Chemistry, Northwestern University, 2145 Sheridan Rd,  
Evanston IL 60208-3113 (USA).
13. NASCENT OH(X<sup>2</sup>Π, v''=0-4) STATE-DISTRIBUTIONS FROM THE O(<sup>1</sup>D)+C<sub>2</sub>H<sub>6</sub>, C<sub>2</sub>H<sub>4</sub> REACTIONS. A LIF AND QCT STUDY  
Miguel González <sup>(a)</sup> \*, María P. Puyuelo <sup>(b)</sup>, Jordi Hernando <sup>(a)</sup>, R. Sayós <sup>(a)</sup>, Pedro A. Enríquez <sup>(b)</sup>, and Javier Guallar <sup>(b)</sup>  
(a) Departament de Química Física i Centre de Recerca en Química Teòrica,  
Universitat de Barcelona, C/ Martí i Franquès, 1. 08028 Barcelona (Spain)  
(b) Departamento de Química, Universidad de La Rioja,  
C/ Madre de Dios, 51. 26004 Logroño (Spain)
14. Semiclassical Tunneling Splitting of the Ground State  
Gennady Mil'nikov and H. Nakamura  
Department of Theoretical Studies, Institute for Molecular Science, Okazaki, Japan.

15. The Vibrational Energy Transfer of  $\text{NO}(\text{X}^2\Pi, v)$  to  $\text{NO}_2(v_3)$  Studied by Time-Resolved FTIR Emission Spectroscopy  
Yuchuan Gong, Xiron Chen, and Brad R. Winer  
Department of Chemistry, University of Puerto Rico, San Juan
16. Unimolecular Reaction Rate Constants of  $\text{NO}_2$  Just Above the Threshold  
Daniil Yu Stolyarov and Curt Wittig  
University of Southern California
17. Absolute Cross Sections for Vibrational Deactivation and Electronic Quenching of the pDFB molecule with High Vibrational Energy  
Uros S. Tasic and C. Parmenter  
Department of Chemistry, Indiana University
18. Collisional Energy Transfer of Highly Vibrationally Excited Methyl- and Azabenzenes: Transition Probabilities and Relaxation Pathways from KCSI Experiments and Trajectory Calculations  
Uwe Grigoleit, Thomas Lenzer, Klaus Luther, Martin Muetzel, and Atsuko Takahara  
Institut fuer Physikalische Chemie, Universitat Goettingen, Germany
19. The  $\text{H} + \text{NO}_2$  Channels in the Photodissociation of HONO at 193.3 nm  
Gabriel Amaral, Kesheng Xu and Jingsong Zhang  
Department of Chemistry, University of California, Riverside
20. Site-specific Photodissociation of Ethyl Iodide at 193.3 nm  
Gabriel Amaral, Kesheng Xu and Jingsong Zhang  
Department of Chemistry, University of California, Riverside
21. Predominance of Non-Equilibrium Dynamics in the Photodissociation of Ketene in the Triplet State  
A.L. Kaledin, J. Seong, and K. Morokuma  
Cherry L. Emerson Center for Scientific Computation and Dept. of Chemistry, Emory University
22. Potential energy surfaces for the  $\text{A}^2\Delta$  state of  $\text{CH-Ar}$   
Galina Y. Kerenskaya, Alexey L. Kaledin, and Michael C. Heaven  
Department of Chemistry, Emory University, Atlanta
23. Kinetic spectroscopy of  $\text{NCl}$   
A. V. Komissarov, M. C. Heaven  
Department of Chemistry, Emory University, Atlanta
24. Dynamics of Rovibrational Transfer in  $\text{Li}_2\text{-Ne}$  Collisions  
Kristin M. Burgess, Amy M. Schneider, Troy N. Stephens, Alena Widman, and Brian Stewart  
Chemistry Department, Wesleyan University
25. The photodissociation of  $\text{CH}_3\text{SCH}_3$  and  $\text{CD}_3\text{SCD}_3$  in the first absorption band studied by velocity map imaging and REMPI  
F. J. Aoiz,<sup>1</sup> L. Banares,<sup>1</sup> B. Martinez-Haya,<sup>2</sup> P. Quintana,<sup>1</sup> and E. Verdasco<sup>1</sup>  
1. Departamento de Quimica Fisica, Facultad de Quimica and CAI de Espectroscopia. Universidad Complutense. 28040 Madrid, Spain  
2. Departamento de Ciencias Ambientales, Facultad de Ciencias Experimentales, Universidad Pablo de Olavide, Ctra. de Utrera, km, 1, 1013 Sevilla, Spain
26. Combining hexapoles with stimulated emission pumping.  
Daniel Matsiev, and Alec M. Wodtke  
UC Santa Barbara, Department of Chemistry & Biochemistry, Santa Barbara, CA
27. Spectra of water dimer and trimer from ab initio potentials  
Krzysztof Szalewicz  
Department of Physics and Astronomy, University of Delaware



28. Electronic Spectroscopy and State-Resolved Photodissociation of Jet-Cooled Vinyl Radical  
M.B. Pushkarsky, A. Mann and C. B. Moore  
Laser Spectroscopy Facility, Department of Chemistry, The Ohio State University
29. Jeremy Hutson
30. John Mccaffrey

**Poster Sessions III and IV: Displayed Wednesday and Thursday**

Odd numbers: Presented Wednesday

Even numbers: Presented Thursday

1. Low-temperature kinetics of reactions of  $C_2H$  and OH radicals with selected hydrocarbons  
A. B. Vakhtin, S. Lee, D. E. Heard(\*), I. W. M. Smith(\*), and S. R. Leone  
JILA, NIST and University of Colorado, Department of Chemistry and Biochemistry  
(\*) JILA Visiting Fellow
2. Photodissociation of ICN in Cyclohexane: A Study of Solvent Effects on Reaction Dynamics  
Amy C. Germaine, Victor A. Lenchenkov, Victor H. Vilchiz, Jeremiah A. Kloepper, and Stephen E. Bradforth  
Chemistry Department, University of Southern California
3. Rotationally Inelastic Collisions of Highly Rotationally Excited Free Radicals:  $CH(A^2\Delta)$  and  $CN(A^2\Pi)$   
B. Nizamov and P.J. Dagdigan.  
Chemistry Department, The Johns Hopkins University
4. Femtosecond Dynamics of  $ICl(CO_2)_n$  Clusters  
Django Andrews and Carl Lineberger  
JILA, University of Colorado, Boulder, Colorado
5. Dynamics of Harpooning in  $Li..FCH_3$  van der Waals complex  
A.J. Hudson, F.Y. Naumkin, H.B. Oh, S.R. Raspopov and J.C. Polanyi  
Department of Chemistry, University of Toronto
6. Inter- and intramolecular energy transfer of diphenylpolyenes in solution explored by fs-fluorescence up-conversion.  
C. Grimm, J. Schroeder, T. Steinel and J. Troe  
IPC, University of Goettingen
7. Theoretical studies of the product translational energy distributions in the  $F + HD \rightarrow HF + D$  reaction  
Yi-Ren Tzeng and Millard H. Alexander  
Department of Chemistry and Biochemistry and Chemical Physics Program, University of Maryland
8. Vibrational Self-consistent Field Approach to Anharmonic Spectroscopy of Molecules in Solids: Application to  $I_2$  in Argon Matrix  
Zsolt Bihary, Benny Gerber, and Ara Apkarian  
University of California, Irvine, USA and Hebrew University, Israel
9. Comparison of the Reactivity of the Symmetric and Antisymmetric Stretch of  $CH_4$  on the Reaction of  $Cl(^2P_{3/2}) + CH_4$   
Sangwoon Yoon, Sarah Henton, Aleks Zivkovic, and F. Fleming Crim  
Department of Chemistry, University of Wisconsin-Madison
10. Full-dimensional IVR calculations on medium-sized organic molecules and their comparison to experiment: Pyrrole and Triazine.  
Ryan Pearman and Martin Gruebele  
Department of Chemistry, University of Illinois

11. The effect of Ar atoms on the dynamics of the  $O(^3P) + HCl$  reaction  
Lichang Wang, and Anne B. McCoy  
Department of Chemistry, The Ohio State University
12. Time-resolved studies of energy transfer from a vibrationally excited  $I_2$ - chromophore into surrounding Ar or  $CO_2$  clusters  
Roland Wester, Alison V. Davis, Arthur E. Bragg, Daniel M. Neumark  
Department of Chemistry, University of California, Berkeley
13. Reduced dimensionality quantum calculations of the  $Cl + CH_4$  reaction and a prediction on the effect of bend excitation on the HCl rotational distribution.  
Sergei Skokov and Joel M. Bowman  
Cherry L. Emerson Center for Scientific Computation and Dept. of Chemistry, Emory University,
14. THEORETICAL STUDY OF THE  $N(^4S) + O_2(X^3\Sigma_g^-) \rightarrow NO(X^2\Pi) + O(^3P)$  REACTION. FROM THE ELECTRONIC STRUCTURE TO THE RATE CONSTANT.  
Carolina Oliva , Miguel González, and R. Sayós  
Departament de Química Física i Centre de Recerca en Química Teòrica C/ Martí i Franqués 1,  
Barcelona (Spain)
15. Ab initio  $^3A''$  ground potential energy surface for the  $O(^3P) + N_2O$  reaction and kinetics study  
Rosendo Valero, R. Sayós , and Miguel González  
Departament de Química Física i Centre de Recerca en Química Teòrica,  
Universitat de Barcelona. C/ Martí i Franqués, 1. 08028 Barcelona, Spain.
16. Ab initio and VTST kinetics study of the  $N(^1D) + O_2(X^3\Sigma_g^-)$  reaction including excited PES  
Irene Miquel, R. Sayós \*, and Miguel González \*  
Departament de Química Física i Centre de Recerca en Química Teòrica,  
Universitat de Barcelona. C/ Martí i Franqués, 1. 08028 Barcelona, Spain.
17. Vibrational spectroscopy and intermolecular vibrational energy transfer for glycine molecule and its complex with water.  
Galina M. Chaban, R. Benny Gerber  
NASA Ames Research Center, Moffett Field, CA, and Hebrew University, Israel
18. Relaxation Processes in Multimolecular Systems  
Eduard Zenkevich  
Laboratory of Molecular Photonics, Institute of Molecular and Atomic Physics, Minsk, Belarus
19. NO(v)-O vibrational energy transfer and its photochemical role in the thermosphere  
Eunsook S. Hwang<sup>1</sup> and James Dodd<sup>2</sup>  
(1)Stewart Radiance Laboratory, Bedford, MA, and (2) Air Force Research Lab, Hanscom AFB
20. Recent Studies of OH(v) Dynamics  
James A. Dodd<sup>1</sup> and Eunsook S. Wang<sup>2</sup>  
(1) Air Force Research Laboratory, Hanscom AFB, MA; and Stewart Radiance Laboratory, Bedford, MA
21. Quantum Dynamical Studies of Atom-Diatom Insertion Reactions  
Jean-Michel Launay and Pascal Honvault  
Université de Rennes, UMR 6627 du CNRS, Rennes, France
22. Li + HF: A Case Study to Develop Novel Computational Technologies for Reactive Scattering  
Antonio Lagana  
Università di Perugia, Dipartimento di Chimica, Italy
23. Theoretical Study of Scanning tunneling Microscope Induced Desorption of Benzene from Si(100)

## Surface

Saman Alavi, Roger Rousseau and Tamar Seideman  
National Research Council of Canada, Steacie Institute for Molecular Sciences, Ottawa, Canada

24. Isotopically Selective Collisional Vibrational Energy Transfer  
Oleg Boiarkine and T.R. Rizzo  
EPFL, LCPM, DC. EPFL, Lausanne, Switzerland
25. The Relative Distributions of State-to-State Inelastic Scattering Cross Sections of  $S_1$  trans-Glyoxal  
Demonstrate a Center-of-Mass Momentum Correlation  
Samuel M. Clegg, Mariana Duca and Charles S. Parmenter  
Sandia National Laboratories, Livermore, CA
26. The Dynamics and Stereodynamics of Four-Body Chemical Reactions by Quasiclassical Trajectory Methods on Ab Initio Potential Energy Surfaces  
Jesus Santamaria  
Universidad Complutense de Madrid, Departamento de Quimica Fisica, Facultad de Quimica, Madrid, Spain
27. Energy transfer from excited  $NH_2$  in the presence of NO, studied by time-resolved FTIR emission spectroscopy  
Timothy P. Marcy, Dwayne E. Heard and Stephen R. Leone  
JILA/NIST and Department of Chemistry and Biochemistry, University of Colorado
28. Trajectory Surface-Hopping Study of the  $I(^2P_{3/2}) + O_2(a^1\Delta_g) \rightarrow I(^2P_{1/2}) + O_2(X^3\Sigma_g^-)$  Energy Transfer Process  
A.L. Kaledin, M.C. Heaven, and K. Morokuma  
Cherry L. Emerson Center for Scientific Computation and Dept. of Chemistry, Emory University
29. A quasi-classical trajectory study of the  $H+N_2O$  reaction  
J. F. Castillo, F. J. Aoiz, L. Banares, and J. Santamaria  
Departamento de Quimica Fisica, Facultad de Quimica and CAI de Espectroscopia. Universidad Complutense. 28040 Madrid, Spain
30. New 3-D potential energy surface for the He-CO system  
George C. McBane and Kirk Peterson  
Department of Chemistry, The Ohio State University and Washington State University
31. Vibrational effects in collision-induced dissociation dynamics of the  $Ar_2^+ + Ar/Ne$  systems  
J. Scott Miller,<sup>1</sup> Rainer Dressler,<sup>1</sup> Yu-hui Chiu,<sup>2</sup> and Dale J. Levandier<sup>2</sup>  
(1) Air Force Research Lab, Hanscom AFB, and (2) Boston College, Institute of Scientific REsearch, Newton.
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### Conference History

Continuing progress in our understanding of molecular energy transfer, and the importance of this process, have provided the impetus for a series of conferences on this topic, dating back to 1969. The conferences have taken place biennially, in alternation between a Gordon Research Conference (GRC) on Molecular Energy Transfer and a European Conference on Molecular Energy Transfer (COMET). This alternation underlines the international aspect of the field and provides a regular channel for exchange between scientists in North America and Europe. The previous GRC/COMET conferences in this series, sites, and organizers are listed below.

Date	Conference	Site	Conference Chair(s)
1969	GRC	New Hampshire	Jeffrey Steinfeld and Charles Parmenter
1971	COMET	Cambridge (UK)	Anthony Gallea
1973	GRC	New Hampshire	C. Bradley Moore
1975	COMET	Loccum (Germany)	Peter Tönnies
1977	GRC	New Hampshire	George Flynn
1979	COMET	Rodez (France)	M. Huez-Aubert
1981	GRC	New Hampshire	Thomas George
1983	COMET	Gloucester (UK)	Anthony McCaffery
1985	GRC	New Hampshire	Paul Houston and Stephen Leone
1987	COMET	Emmenetten (Switzerland)	Martin Quack
1989	GRC	New Hampshire	Eric Weitz and George Schatz
1991	COMET	Nijmegen (Netherlands)	Rolf Reuss
1993	GRC	New Hampshire	David King and John Stephenson
1995	COMET	Kloster Banz (Germany)	Hans-Joachim Werner and Peter Andresen
1997	GRC	Ventura, CA	Marsha Lester and Millard Alexander
1999	COMET	Italy	Antonio Lagana and P. Casavecchia
2001	GRC	Ventura, CA	Hanna Reisler and Joel Fowman
2003	COMET	Spain	F. Javier Aoliz and Miguel Gonzalez



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# MOLECULAR ENERGY TRANSFER

FOUR POINTS SHERATON: HARBORTOWN  
(14-Jan-01) - (19-Jan-01)

**NOTE:** Receipt of Application does not guarantee acceptance to a Conference. Applications are reviewed by the Conference Chair. If the Chair approves your application, you become **Accepted**, and a registration packet will be mailed immediately. Please allow 3-5 days for your registration to reach you by mail once your name appears. When your registration packet has been received back in our office, you become **Registered**.

Only those who have been **Accepted** or **Registered** will have their names listed below. Names of people who have only applied and have yet to be accepted will NOT appear.

Name	Organization	Participation	Status
<u>SAMAN ALAVI</u>	NATIONAL RESEARCH COUNCIL OF CANADA	Poster Presenter	Registered
<u>MILLARD H ALEXANDER</u>	UNIVERSITY OF MARYLAND	Speaker	Registered
<u>DJANGO H ANDREWS</u>	UNIVERSITY OF COLORADO	Poster Presenter	Registered
<u>FRANCISCO J AOIZ</u>	UNIVERSIDAD COMPLUTENSE	Speaker	Registered
<u>LUIS BANARES</u>	UNIVERSIDAD COMPLUTENSE	Poster Presenter	Registered
<u>PAUL F BARBARA</u>	UNIVERSITY OF TEXAS AT AUSTIN	Speaker	Registered
<u>ZSOLT BIHARY</u>	UNIVERSITY OF CALIFORNIA	Poster Presenter	Registered
<u>OLEG V BOIARKINE</u>	SWISS FED. INSTIT. OF TECH.	Poster Presenter	Registered
<u>JOEL BOWMAN</u>	EMORY UNIVERSITY	Chair	Registered
<u>STEPHEN E BRADFORTH</u>	UNIVERSITY OF SOUTHERN CALIFORNIA	Speaker	Registered
<u>LAURIE J BUTLER</u>	THE UNIVERSITY OF CHICAGO	Speaker	Registered
<u>PIERGIORGIO CASAVECCHIA</u>	UNIVERSITA DI PERUGIA	Speaker	Registered
<u>GALINA M CHABAN</u>	NASA	Poster Presenter	Registered
<u>STEVE CHAMBREAU</u>	UNIVERSITY OF CALIFORNIA, RIVERSIDE	Poster Presenter	Registered
<u>DELPHINE CHASTANG</u>	UNIVERSITY OF SOUTHERN CALIFORNIA	Attendee	Registered
<u>SAMUEL M CLEGG</u>	SANDIA NATIONAL LABORATORIES	Poster Presenter	Registered
<u>ROBERT E CONTINETTI</u>	UNIV. OF CALIFORNIA, SAN DIEGO	Speaker	Registered
<u>PAUL J DAGDIGIAN</u>	JOHNS HOPKINS UNIVERSITY	Speaker	Registered
<u>JAMES A DODD</u>	AIR FORCE RESEARCH LABORATORY	Poster Presenter	Registered
<u>VLADIMIR L DRIBINSKI</u>	UNIVERSITY OF SOUTHERN CALIFORNIA	Poster Presenter	Registered
<u>LIN FENG</u>	UNIVERSITY OF SOUTHERN CALIFORNIA	Poster Presenter	Registered
<u>GINA M FLORIO</u>	PURDUE UNIVERSITY	Poster Presenter	Registered
<u>GEORGE W FLYNN</u>	COLUMBIA UNIVERSITY	Speaker	Registered
<u>BENNY GERBER</u>	HEBREW UNIVERSITY	Speaker	Registered
<u>AMY C GERMAINE</u>	UNIVERSITY OF SOUTHERN CALIFORNIA	Poster Presenter	Registered
<u>YUCHUAN GONG</u>	UNIVERSITY OF PUERTO RICO	Poster Presenter	Registered
<u>MIGUEL GONZALEZ</u>	UNIVERSITY OF BARCELONA	Poster Presenter	Registered
<u>NADINE HALBERSTADT</u>	CNRS-UNIVERSITE PAUL SABATIER	Speaker	Registered
<u>NILS HANSEN</u>	UNIVERSITY OF CALIFORNIA, SANTA BARBARA	Attendee	Registered
<u>MICHAEL C HEAVEN</u>	EMORY UNIVERSITY	Speaker	Registered
<u>WILSON HO</u>	UNIVERSITY OF CALIFORNIA	Speaker	Registered
<u>JEREMY M HUTSON</u>	UNIVERSITY OF DURHAM	Speaker	Registered
<u>EUNSOOK S HWANG</u>	UTAH STATE UNIVERSITY	Poster Presenter	Registered
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<u>ALEXEY L KALBDIN</u>	EMORY UNIVERSITY	Poster Presenter	Registered
<u>GALINA KERENSKYA</u>	EMORY UNIVERSITY	Poster Presenter	Registered
<u>ANATOLY V KOMISSAROV</u>	EMORY UNIVERSITY	Poster Presenter	Registered
<u>JEAN-MICHEL LAUNAY</u>	UNIVERSITE DE RENNES	Poster Presenter	Registered
<u>STEPHEN LEONE</u>	NIST/UNIVERSITY OF COLORADO	Speaker	Registered
<u>MARSHA I LESTER</u>	UNIVERSITY OF PENNSYLVANIA	Speaker	Registered
<u>DALE J LEVANDIER</u>	BOSTON COLLEGE INSTITUTE FOR SCIENTIFIC RESEARCH	Poster Presenter	Registered
<u>SERGEY V LEVCHENKO</u>	UNIVERSITY OF SOUTHERN CALIFORNIA	Poster Presenter	Registered
<u>TIANQUAN LIAN</u>	EMORY UNIVERSITY	Speaker	Registered
<u>CARL LINEBERGER</u>	UNIVERSITY OF COLORADO, BOULDER	Attendee	Registered

<u>KLAUS H LUTHER</u>	UNIVERSITY OF GOETTINGEN	Attendee	Registered
<u>DAVID MANOLOPOULOS</u>	OXFORD UNIVERSITY	Speaker	Registered
<u>TIMOTHY P MARCY</u>	JILA, UNIVERSITY OF COLORADO	Poster Presenter	Registered
<u>DANIEL V MATSIEV</u>	UNIVERSITY OF CALIFORNIA, SANTA BARBARA	Poster Presenter	Registered
<u>GEORGE C MCBANE</u>	OHIO STATE UNIVERSITY	Poster Presenter	Registered
<u>JOHN MCCAFFREY</u>	NATIONAL UNIVERSITY OF IRELAND	Poster Presenter	Registered
<u>ANNE B MCCOY</u>	OHIO STATE UNIVERSITY	Poster Presenter	Registered
<u>ROGER E MILLER</u>	UNIVERSITY OF NORTH CAROLINA, CHAPEL HILL	Speaker	Registered
<u>ANDRZEJ MORDZINSKI</u>	POLAND INSTITUTE OF PHYSICAL CHEMISTRY	Poster Presenter	Registered
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<u>GILBERT M NATHANSON</u>	UNIVERSITY OF WISCONSIN-MADISON	Speaker	Registered
<u>BORIS R NIZAMOV</u>	JOHNS HOPKINS UNIVERSITY	Poster Presenter	Registered
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<u>CHARLES PARMENTER</u>	INDIANA UNIVERSITY	Attendee	Registered
<u>BRADLEY F PARSONS</u>	THE UNIVERSITY OF CHICAGO	Poster Presenter	Registered
<u>RYAN PEARMAN</u>	UNIVERSITY OF ILLINOIS	Poster Presenter	Registered
<u>KIRK A PETERSON</u>	WASHINGTON STATE UNIVERSITY	Speaker	Registered
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<u>AARON B POTTER</u>	UNIVERSITY OF SOUTHERN CALIFORNIA	Poster Presenter	Registered
<u>MICHAEL B PUSHKARSKY</u>	OHIO STATE UNIVERSITY	Poster Presenter	Registered
<u>SERGUEI A RASPOPOV</u>	UNIVERSITY OF TORONTO	Attendee	Registered
<u>HANNA REISLER</u>	UNIVERSITY OF SOUTHERN CALIFORNIA	Chair	Registered
<u>THOMAS R RIZZO</u>	ECOLE POLYTECHNIQUE FEDERALE DE LAUSANNE	Speaker	Registered
<u>PETER J ROSSKY</u>	UNIVERSITY OF TEXAS AT AUSTIN	Speaker	Registered
<u>DAVID RUEDA</u>	ECOLE POLYTECHNIQUE FEDERALE DE LAUSANNE	Poster Presenter	Registered
<u>REINHARD SCHINKE</u>	MPI STROMUNGSFORSCHUNG	Speaker	Registered
<u>TOBIAS STEINEL</u>	UNIVERSITY OF GOETTINGEN	Poster Presenter	Registered
<u>BRIAN A STEWART</u>	WESLEYAN UNIVERSITY	Poster Presenter	Registered
<u>DANIIL YU STOLYAROV</u>	UNIVERSITY OF SOUTHERN CALIFORNIA	Poster Presenter	Registered
<u>KRZYSZTOF SZALEWICZ</u>	UNIVERSITY OF DELAWARE	Poster Presenter	Registered
<u>UROS S TASIC</u>	INDIANA UNIVERSITY	Poster Presenter	Registered
<u>YI-REN TZENG</u>	UNIVERSITY OF MARYLAND	Attendee	Registered
<u>JOELLE S UNDERWOOD</u>	UNIVERSITY OF CALIFORNIA	Poster Presenter	Registered
<u>ANDREI VAKHTIN</u>	JILA, UNIVERSITY OF COLORADO	Poster Presenter	Registered
<u>MARC C VAN HEMERT</u>	LEIDEN UNIVERSITY	Poster Presenter	Registered
<u>ANDREJ VILESOV</u>	UNIVERSITY OF SOUTHERN CALIFORNIA	Speaker	Registered
<u>LICHANG WANG</u>	OHIO STATE UNIVERSITY	Poster Presenter	Registered
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<u>SHENGLI ZOU</u>	EMORY UNIVERSITY	Poster Presenter	Registered

